WHAT'S HAPPENING IN MUNICIPAL WIRELESS?

NetLogix

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

MISAC MUNICIPAL INFORMATION SYSTEMS ASSOCIATION OF CALIFORNIA

WIRELESS BROADBAND OPTIONS

1. UMTS/HSDPA
2. EV-DO
3. WiMAX
4. WiFi

} 3G

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HOW'D IT ALL BEGIN?

PEOPLE NEED TO BE CONNECTED

WiFi PRESENTED A NEW OPTION

- BROADBAND ACCESS
- ANYWHERE
- ANYTIME

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WiFi HAS EVOLVED

1. BEGAN IN THE HOME/OFFICE
2. SPREAD TO HIGH LOITERING AREAS
   - → HOTELS/RESORTS
   - → COFFEE SHOPS
3. BECAME A MUNICIPAL AMENITY
   - → LIBRARIES
   - → CITY FACILITIES
   - → PARKS / REC CENTERS
   - → BUSINESS DISTRICTS
4. DEMAND FOR CITYWIDE WiFi IS GROWING

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THE BIG QUESTION...

HOW ARE CITIES GOING TO PAY FOR THIS NETWORK?

Image credit to “Digital City Expo”

Prevailing Network Ownership Model:
PUBLIC/PRIVATE PARTNERSHIP

By Definition…

- *Municipality forms a "partnership" with a Service Provider whereby there is give and take on both sides of the agreement.*
- *Typically the Service Provider agrees to fund the network construction and the Municipality grants access at little-to-no cost for the right to install on Municipally-owned properties.*
- *ISPs: EarthLink, MetroFi, MobilePro, Google, Aiirmesh, Citizens/Frontier Internet, US Internet, Embarq, RedMoon Broadband, and many more…*
- *Most Municipalities pursued this model early on…but times have changed.*

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CALIFORNIA CITIES ON RECORD STATING AN INTEREST IN WIFI

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CALIFORNIA CITIES WITH AN OUTDOOR WIFI NETWORK

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CALIFORNIA CITIES WITH "AT LEAST 50% CITYWIDE" WIFI COVERAGE

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THE MODEL HAS SHIFTED

- Several ISPs announced their exit from Municipal Wireless.
- This triggered a slew of articles labeling Municipal Wireless as a “failure”.
- They were highly incorrect.
- The primary “failure” is in the consumer access model where Internet access is the only application.
- The secondary “failure” is in the lack of ubiquitous coverage by the ISPs.
- Anchor Tenancy is now required.

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WHAT ARE CITIES GOING TO DO NOW?

http://www.flickr.com/photos/melita/

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THE OPTIONS

RENT

- → Incumbents
- → Cellular 3G/4G
- → Network Service Providers

BUY

- → Construct your own

HOPE

- → Grass Roots/Community Wireless
- → Hope for market shift

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THE CITIZENS ALREADY WROTE CHECKS

- In 1992 the federal government agreed to allow the Bells to build a nationwide fiber optic network
  - → "45 Mbps to every home" (promised)
- Funded by removing "Rate of Return" services such as Call Waiting/Call Forwarding.
- It is estimated that the Bells have collected over $200B in fees
  - → $2,000 from every household (avg.)

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MUNICIPALITIES CAN HOPE FOR COMMUNITY WIRELESS NETWORKS TO DEVELOP

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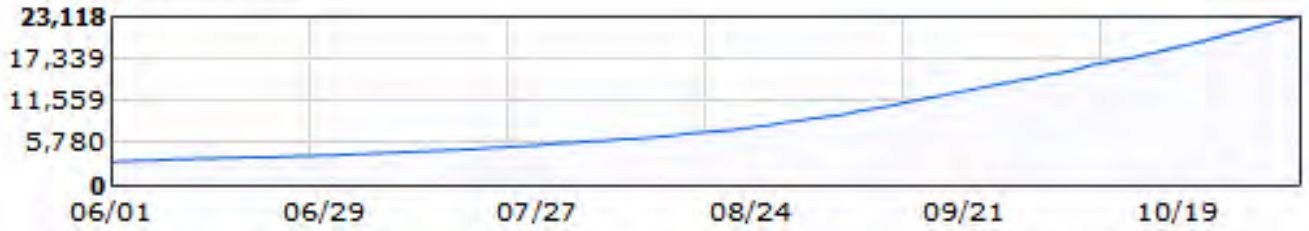
Free the Net SF

Total of **23403 users** transferred
6.148954562 terabytes

Help out at http://sf.meraki.net

Total users connected



Map of Users per Meraki Device

Move the mouse over a device to see its route to the Internet

Image credit to Meraki Networks

COMMUNITY WIRELESS
WON'T ADDRESS MUNICIPAL NEEDS

- → Low power
- → Security issues
- → Lack of features
- → Lack of control
- → Not managed appropriately

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REGARDLESS...

MUNICIPALITIES WILL NEED TO DEVELOP A PLAN FOR APPLICATIONS

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KEY CHALLENGES REMAIN FOR LOCAL GOVERNMENT

- → Public Safety Enhancements
- → Disaster Management
- → Increased Efficiencies
- → Cost Reductions
- → Economic Development
- → Telemedicine
- → Digital Inclusion
- → And much, much more…

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APPLICATION:
PUBLIC SAFETY

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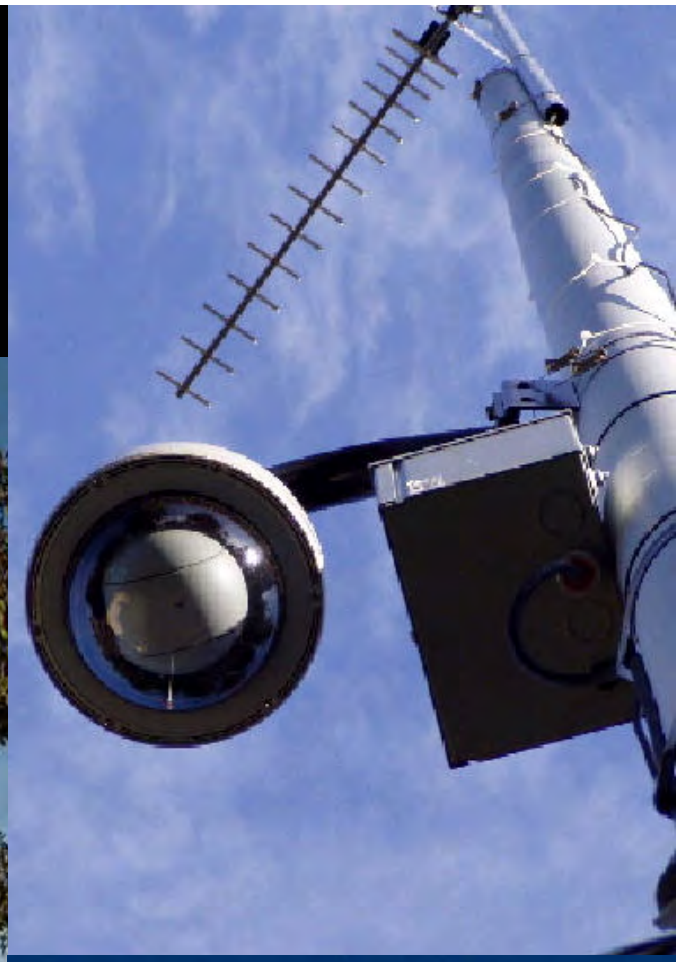
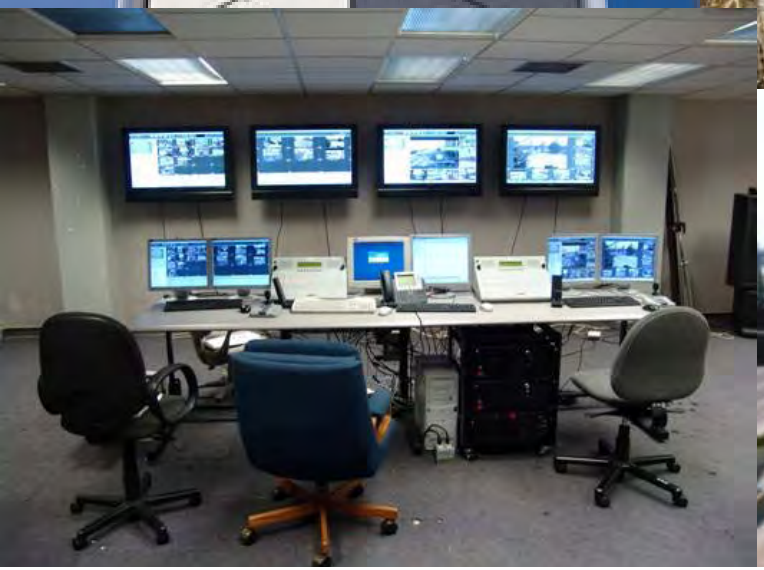
APPLICATION:
VIDEO SURVEILLANCE





APPLICATION
TRAFFIC CONTROL

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KEY CHALLENGES REMAIN FOR LOCAL GOVERNMENT

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APPLICATION:
INFRASTRUCTURE SENSORS

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KEY CHALLENGES REMAIN FOR LOCAL GOVERNMENT

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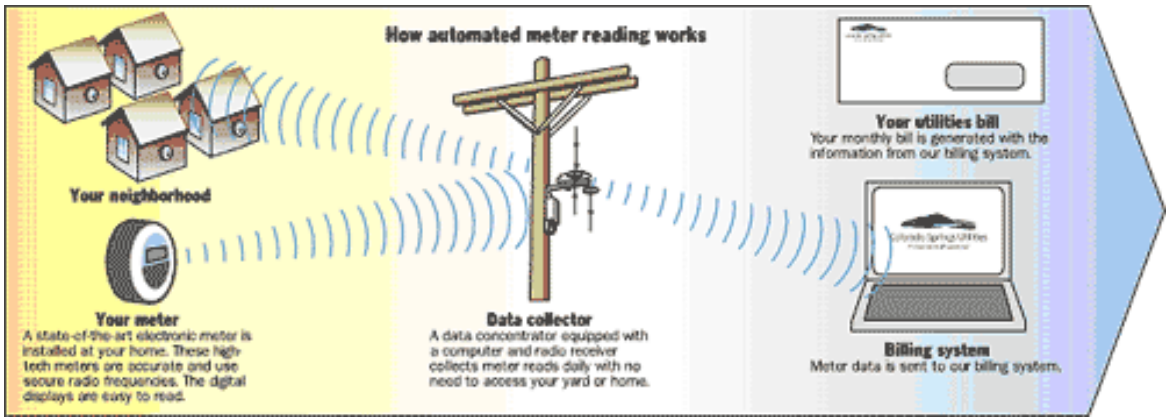
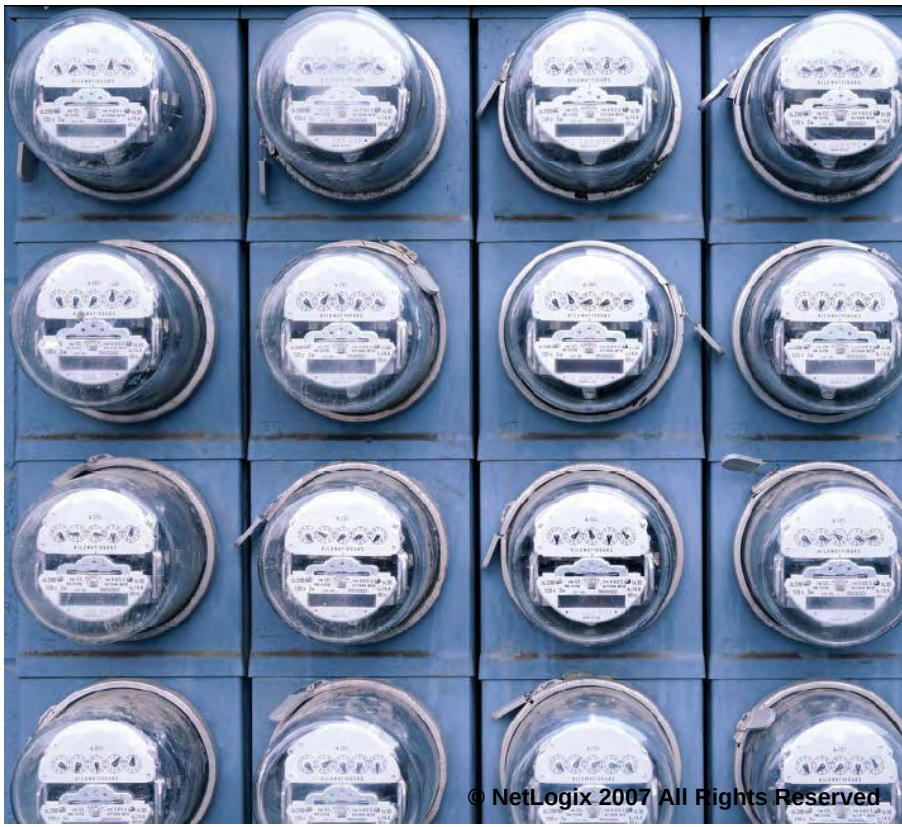
APPLICATION:
AUTOMATED METER READING





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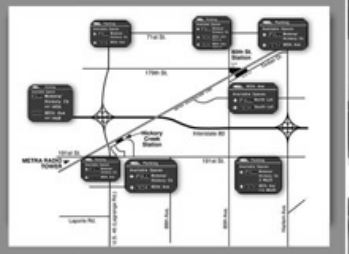
PARKING METER
AUTOMATION



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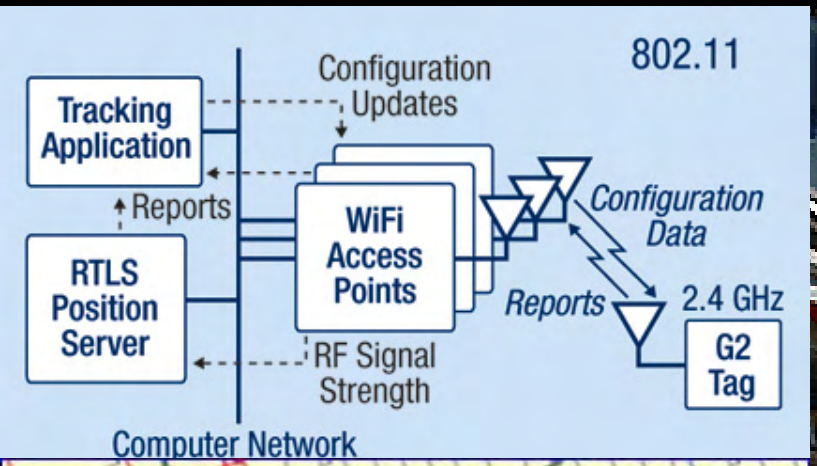
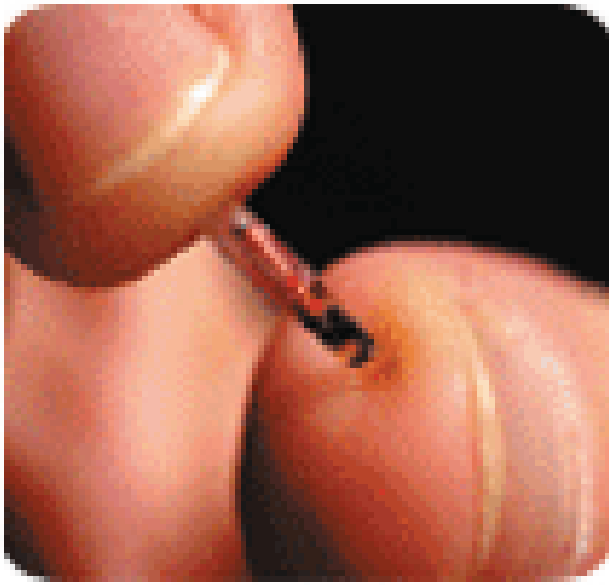
APPLICATION
RFID & ASSET TRACKING





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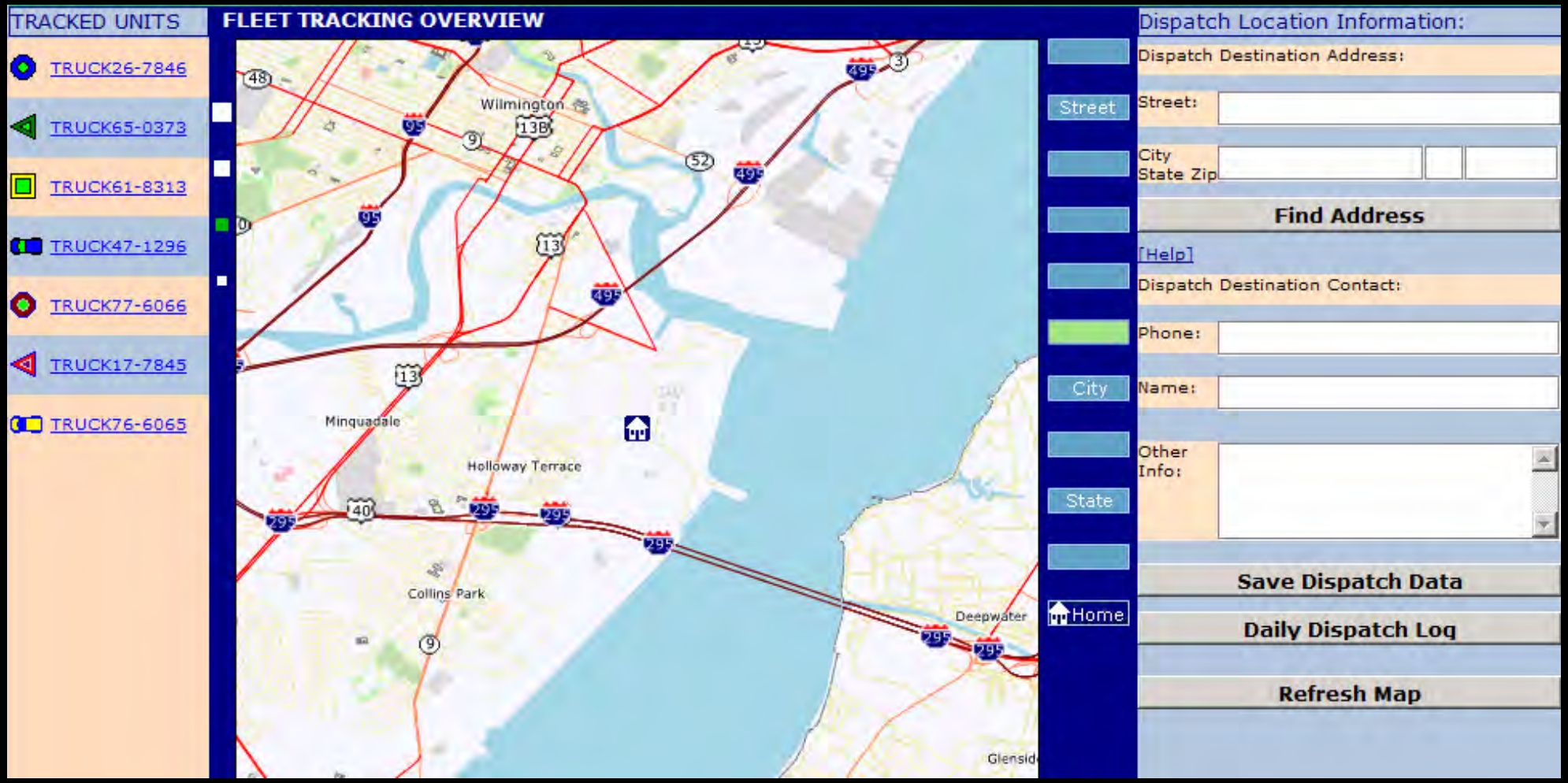
APPLICATION
FLEET MANAGEMENT



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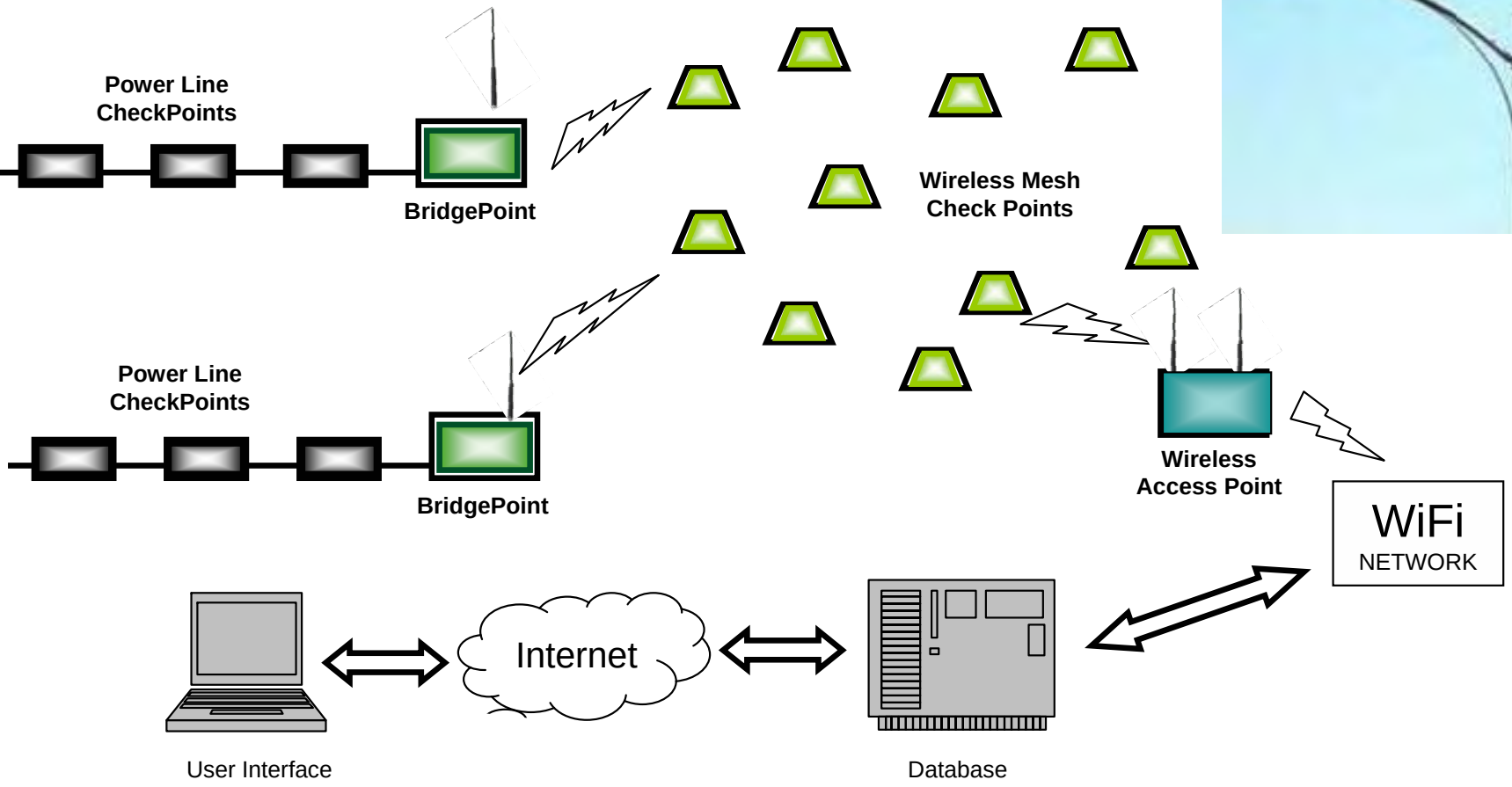
APPLICATION
STREET LIGHT MANAGEMENT



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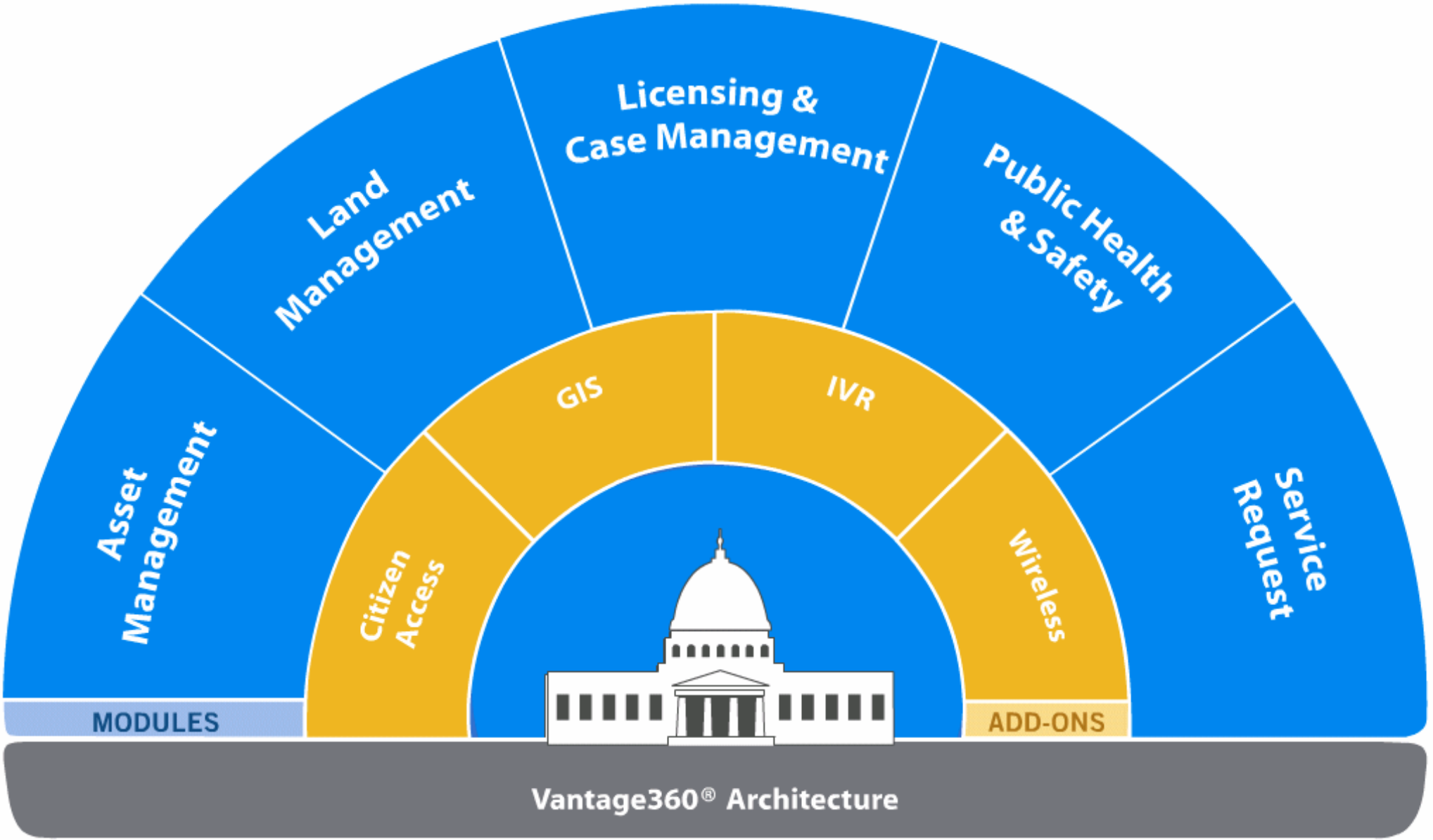
APPLICATION
WORKFLOW AUTOMATION



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KEY CHALLENGES REMAIN FOR LOCAL GOVERNMENT

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INTERNET ACCESS:
A COMMUNITY BENEFIT

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WiFi IS AVAILABLE IN MORE DEVICES

Wi-Fi Phone Comparison Chart

	Wi-Fi Only				WiFi/Cellular	
Model	**Netgear Wi-Fi Phone**	**Belkin Wi-Fi Phone**	**Sony Mylo**	**UTStarcom F1000**	**Nokia 6136**	**Samsung SGH-T709**
Model Number	SPH101	F1PP000GN-SK	COM-1	F1000	6136	SGH-T709
List Price	$230	$180	$350	$130	$80*	$80*
Service	Skype	Skype	Skype, Google Talk, Yahoo Messenger	Vonage	T-Mobile HotSpot@Home	T-Mobile HotSpot@Home

* with 2-year contract, before any rebates

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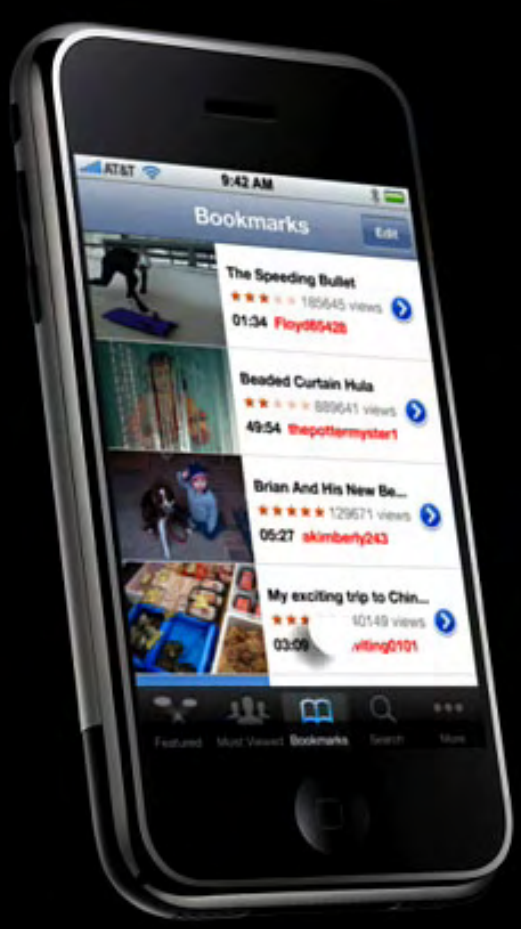
...AND EVEN MORE DEVICES!



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WEB APPLICATIONS ARE IMPROVING!

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PORTABLE ACCESS

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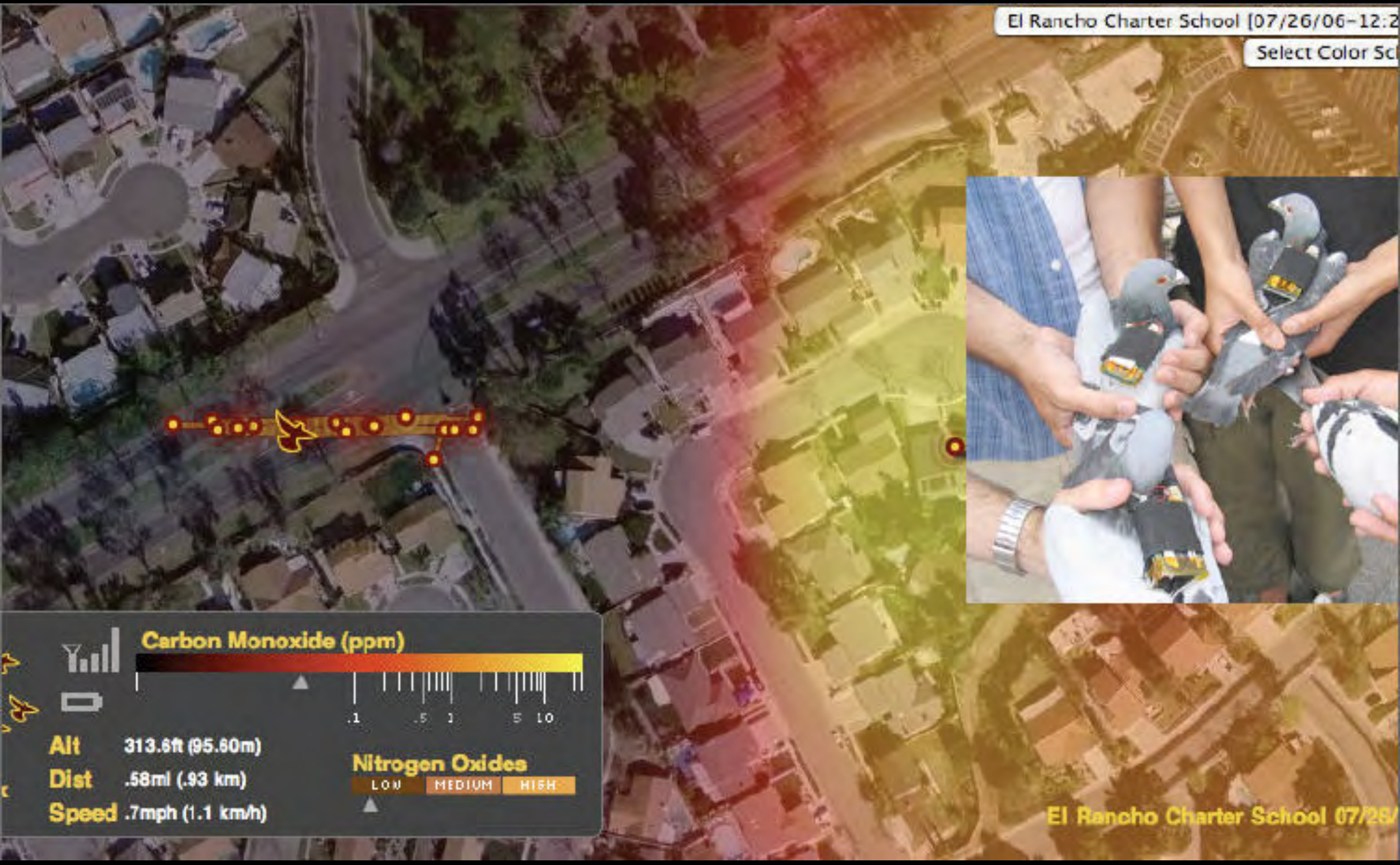
DOWNTOWN SAN JOSE PIGEON PROJECT



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WIRELESS TECHNOLOGY WILL REQUIRE CHANGES TO THE MUNICIPAL MINDSET

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SOME ONLINE RESOURCES

Wireless Internet Institute
www.w2i.com

MuniWireless
www.muniwireless.com

WiFiNetNews
www.wifinetnews.com

Daily Wireless
www.dailywireless.org

MetroNetIQ
www.metronetiq.com

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THANK YOU!

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